PATENT SPECIFICATION

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COMPLETE SPECIFICATION.

Method of Tipping Cigarette Paper Strips in Cigarette-making Machines.

We, "UNIVERSELLE" CIGARETTEN-MASCHINEN-FABRIK J. C. MULLER & Co., of Zwickauer Strasse 27, Dresden, Germany, a German company, and FRANZ HEINRICH BENNO STELZER, of Tharadter Strasse 68, Dresden, Germany, of German nationality, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

In forming cork tipped cigarettes the cork block is cut into thin sheets which are not sufficiently strong to allow of treatment in a cigarette machine. As a result the delicate cork foil is gummed to tissue paper so that a tipping material is formed which is strong enough to be wound into coils and thus to be used in cigarette-making machines.

In Fig. 1 of the accompanying drawing is illustrated diagrammatically the coiled strip in use in a cigarette machine. The tipping strip b is unwound from the coil a and is fed forward intermittently by the aid of a pair of feeding rolls, c, d, a distance equal to the length of a tip. The strip b passes over a table e where a cutter f severs the tip portion g from the forward end of the strip. The forward edge of the severed tip portion is fed forward until it passes between the rollers h and i, of which the upper roller i is mounted on a rocking lever. As soon as this roller is lowered on to the roller h the two rollers grip the tip portion and as they rotate the tip portion is fed between them. The cigarette paper strip k passes over the roller i and the arrangement is such that on each occasion when a severed tip comes into contact with the cigarette paper strip between the rollers h and i, the cigarette paper strip presents a gummed portion so that tips are gummed to the cigarette paper strip at regular intervals.

The tipping strip consists of two layers, a layer of tissue paper b^1 and a layer of cork b^2, as is illustrated in Fig. 2, which is a cross section through the tipping strip. When two layers are gummed together, especially when each layer is of a different material, there is a tendency for the foil or strip not to lie flat and even, but to cockle in the manner illustrated in Fig. 3.

In the tipping strip b the layer of tissue paper b^1 is the upper and the layer of cork b^2 is the lower. When the strip is wound on the spool or coil it lies flat and on its passage to the pair of feeding rollers c and d it still lies smooth because the rollers pull the strip under tension from the spool a. As soon, however, as the portion g is severed from the strip and lies free for a moment on the table before it is gripped between the rollers h and i, it curves as illustrated in Fig. 3. As a result the tip is not correctly gripped or is not gripped at all by the rollers since its lateral edges are curved and consequently the cigarette paper strip is not properly tipped.

In order to remove this disadvantage according to this invention the tipping strip, just in front of the point where it is severed, is passed on its cork side over a source of heat. As is well-known, with layers gummed together which have a tendency to become curved, this tendency is overcome if a sufficiently powerful heat radiation is applied to the side which tends to become arched. Accordingly there is provided, for example at l, between the spool and the pair of feeding rollers c and d, a heating box in which are arranged electrical resistances for producing the necessary heat. The

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tipping strip with its cork side b^3 facing it passes over this box, the heat being so regulated that within the time available the tendency of the strip to curve is overcome. When a tip g is severed from such a previously treated strip it remains flat on the table e and can be properly gripped by the pair of rollers h and i.

The source of heat is arranged as close as possible to the pair of feeding rollers c and d. If the source of heat is arranged behind the pair of feeding rollers and between them and the cutter f near the table, care must be taken to reduce the heating effect because after the cutting operation the forward end b^3 of the tipping strip lies freely on the table e and thus would curve as shown in Fig. 3 before the heating action could become fully effective. The roller d can also be correspondingly heated. Care must also be taken in this case that the strips between the pair of rollers c and d are under pressure and can therefore be subjected to the full effect of the heat.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

In a method of tipping a cigarette paper strip at intervals with cork tips which are severed from a continuous tipping strip, leading the cork side of the tipping strip past a source of heat located just in front of the point where the tips are severed.

Dated this 17th day of April, 1925.

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[This Drawing is a reproduction of the Original on a reduced scale.]

Fig. 1

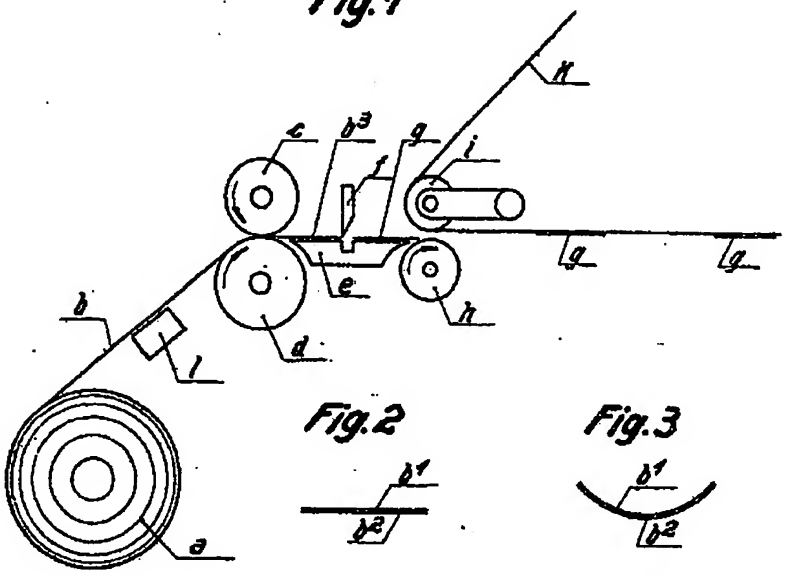

Fig. 2

Fig. 3

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